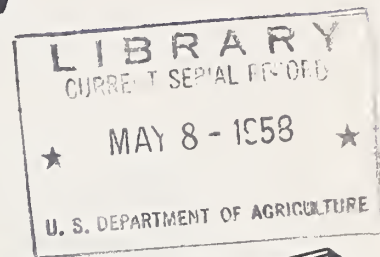


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Milk Distributors



Sales and Costs

October - December 1957

U. S. DEPARTMENT OF AGRICULTURE
Agricultural Marketing Service
Marketing Research Division

MILK DISTRIBUTORS' SALES AND COSTS

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: This report is the current issue of a series based upon :
: information obtained from distributors of fluid milk and :
: cream products. These distributors are subscribers to a :
: cost comparison service which furnished the Department with :
: tabular data for analyses. A uniform accounting system is :
: used and information is given on standardized forms. Data :
: reported include: Costs and quantities of raw milk and :
: other raw materials; prices and quantities of products sold;;
: and operating costs. :
: :
: The firms selected are considered to be typical in the fol- :
: lowing characteristics: Privately owned, moderate size, :
: and chiefly single plant firms. Very small firms, national :
: chains, and producer-distributors are not included. :
: :
: All major geographic areas of the country are represented. :
:

Milk distributors' sales value of dairy products in 1957 was \$11.15 per 100 pounds of milk and cream processed, a decrease of \$0.07 from 1956; for the October-December quarter sales value increased seasonally and was \$0.05 more than a year earlier. The cost of raw milk and cream decreased \$0.16 on a year-to-year basis. It rose \$0.30 from the third to the fourth quarter, but was \$0.17 below the fourth quarter of 1956. Distributors' gross margin in 1957 was \$0.10 more than in 1956, but declined during the year. Operating costs increased for the sixth straight year, and in the October-December quarter, again were a new high. Net margin in 1957 was \$0.01 per 100 pounds higher than in 1956 and in the fourth quarter, 1957, was \$0.01 higher than a year earlier.

SALES VALUE CONTINUES SIDEWISE MOVEMENT

Sales value of dairy products, per 100 pounds of milk and cream processed, for the year 1957, held at about the same level as in 1956; the decrease of \$0.07 from the \$11.22 of 1956 was less than 1 percent. In the first and fourth

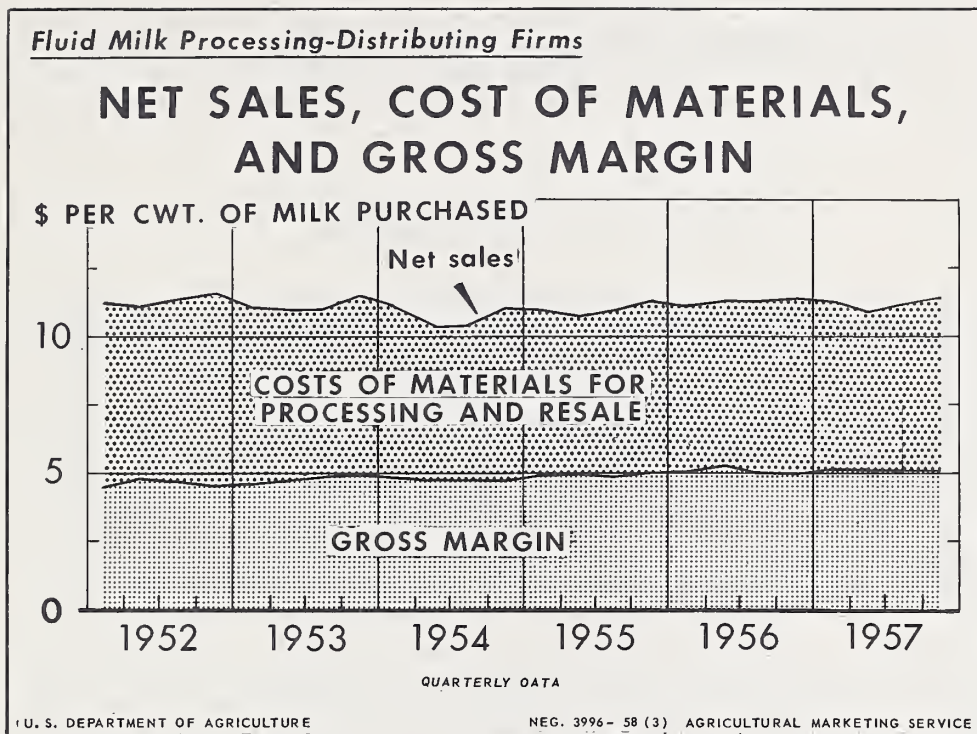


Figure 1

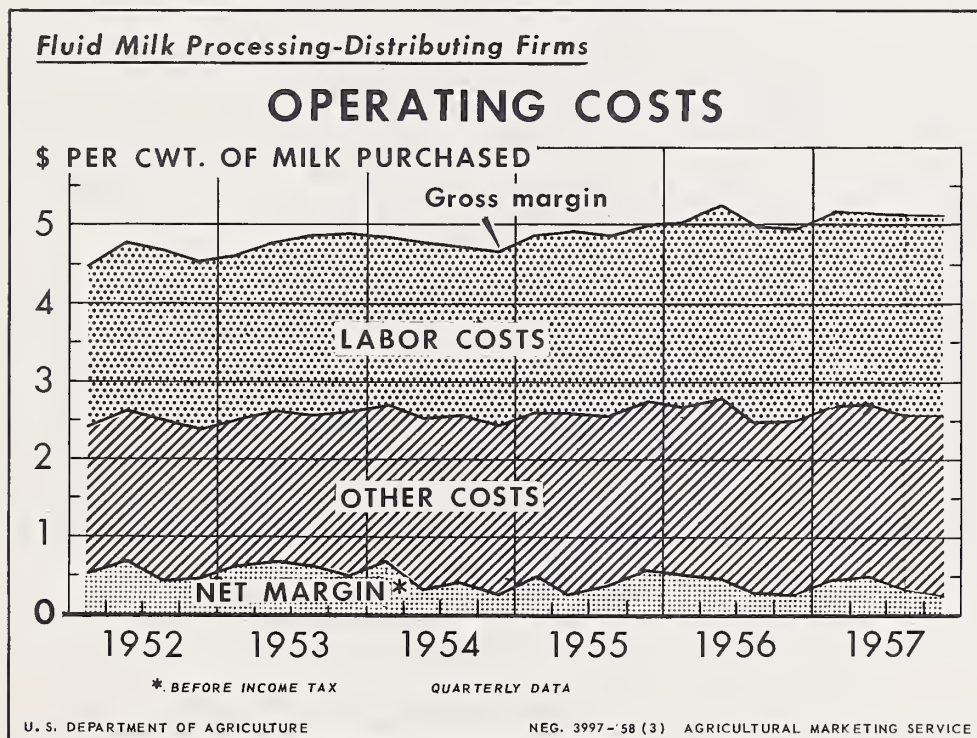


Figure 2

quarters sales values were above a year earlier but this was more than offset by lower sales values for the second and third quarters. In fact, except for the somewhat lower sales value in 1954, there has been no significant change for six years. Maximum variation for the entire period has been only about 5 percent.

COST OF GOODS SOLD DECLINES

Cost of goods sold, which had increased for each of the two previous years, decreased in 1957. At \$6.01 per 100 pounds of milk and cream processed this cost was lower than for any previous year except 1954, and was \$0.17 less than in 1956. For the October-December quarter, cost of goods sold increased seasonally over the July-September quarter; the increase of \$0.27 was about the same as in earlier years. Fourth quarter, 1957, was \$0.12 less than the same quarter 1956. Of the total \$0.17 variation in total cost of goods sold from 1956 to 1957, \$0.16 resulted from costs of raw milk and cream. For the fourth quarter 1957 compared to the fourth quarter 1956, raw milk and cream decreased \$0.17 while cost of other raw materials increased \$0.05.

As a percent of sales value, cost of goods sold has decreased in every year: For 1952--59.3 percent; 1953--56.9 percent; 1954--55.5 percent; 1955--55.2 percent; 1956--55.1 percent; and 1957--53.9 percent. Fourth quarter, 1957, at 55.1 percent is 1.2 percentage points below a year earlier, and is the lowest for any fourth quarter. Therefore, gross margin rises steadily.

OPERATING COSTS TURN UPWARD

After remaining fairly steady for 6 quarters, operating costs have again turned upward. The increases in the last two quarters were large enough to bring the yearly average up to \$4.77 per hundred pounds of milk and cream processed. However, the increase of \$0.09 from 1956 was the smallest of any year since this series began. During 4 of the past 5 years, operating costs were seasonally lower in the last half of the year; the increase in the last half of 1957 may indicate definitely higher costs.

Most major costs increased during the past year. Personnel costs were up \$0.07 to \$2.50. Operating supplies up \$0.01 to \$0.29; and repairs, rent, and depreciation up \$0.03 to \$0.67, continuing the increase of about 5 percent each year. Container costs decreased by \$0.01 to \$0.71, probably as a result of shifts to larger sized containers and to dispenser cans. All other costs combined decreased by \$0.01. For the October-December 1957 quarter operating costs were up \$0.16 from the same quarter, 1956, mostly as a result of increases of \$0.07 in personnel, \$0.02 in operating supplies and \$0.03 in repairs, rent, and depreciation.

Table 1.-- COSTS AND MARGINS FOR SELECTED DAIRY FIRMS: per hundred pounds of milk and cream processed, for years 1952-57, and for the 5 most recent quarters

Account	1957											
	1952	1953	1954	1955	1956	1957	Oct.-	Jan.-	Apr.-	July-	Oct.-	
							Dec.	Mar.	June	Sept.	Dec.	
	Dol.	Dol.	Dol.	Dol.	Dol.	Dol.	Dol.	Dol.	Dol.	Dol.	Dol.	
Net sales.....	11.32	11.12	10.69	10.95	11.22	11.15	11.31	11.29	10.85	11.10	11.36	
Cost of raw materials :												
Raw milk and cream...	5.85	5.43	5.07	5.12	5.30	5.14	5.56	5.29	4.82	5.09	5.39	
Other.....	.86	.90	.86	.94	.88	.87	.81	.83	.88	.89	.86	
Total.....	6.71	6.33	5.94	6.05	6.18	6.01	6.37	6.12	5.70	5.98	6.25	
Gross margin.....	4.61	4.79	4.75	4.91	5.04	5.14	4.94	5.17	5.15	5.12	5.11	
Operating cost :												
Salaries, wages, and :												
commissions 1/.....	2.15	2.19	2.21	2.28	2.43	2.50	2.46	2.48	2.45	2.53	2.53	
Containers.....	.60	.62	.65	.70	.72	.71	.71	.73	.68	.70	.72	
Operating supplies...	.30	.32	.35	.32	.28	.29	.28	.29	.29	.29	.30	
Repairs, rent, and :												
depreciation.....	.50	.52	.57	.60	.64	.67	.65	.66	.66	.68	.68	
Taxes.....	.06	.06	.06	.06	.05	.06	.05	.05	.05	.06	.06	
Insurance.....	.02	.02	.03	.04	.04	.04	.04	.04	.04	.04	.04	
Services.....	.16	.19	.19	.18	.17	.17	.16	.15	.17	.20	.17	
Advertising.....	.15	.15	.16	.18	.19	.18	.18	.18	.19	.15	.19	
General.....	.15	.13	.13	.14	.16	.15	.18	.15	.14	.15	.18	
Total.....	4.09	4.20	4.35	4.50	4.68	4.77	4.71	4.73	4.67	4.80	4.87	
Net margin 2/.....	.52	.59	.40	.40	.36	.37	.23	.44	.48	.32	.24	
Firms reporting.....	43	51	75	83	80	80	80	80	80	80	80	

1/ Includes State unemployment, Federal old age, workmen's compensation, and employee benefits.
2/ Net returns to owners before income taxes.

Net margin, the remainder for payment of income taxes and return on invested capital, increased slightly—from \$0.36 to \$0.37—in 1957. The decrease of \$0.07 in sales value and increase of \$0.09 in operating costs was more than offset by the decrease of \$0.17 in cost of goods sold. For the year 1957 profits for the individual quarters shows the same seasonal pattern as earlier years.

TRENDS IN PERSONNEL RATES AND PRODUCTIVITY

Increasing efficiency in the use of personnel has partially offset the increasing wage and salary rates during the period of July-September 1955, through July-September 1957 (tables 2 and 3). The number of minutes of personnel time required to process a hundredweight of milk has decreased by about 7 percent, while the overall wage and salary rates have increased by about 19 percent.

Table 2.--WAGES AND SALARY RATES PER HOUR (corrected for seasonal variations) ^{1/}

Period	Personnel categories				
	Field	Plant	Delivery	Administrative	
				Office	Executives
	Dollars	Dollars	Dollars	Dollars	Dollars
1955					
July-Sept.....	1.82	1.43	1.94	1.47	5.12
Oct.-Dec.....	1.73	1.41	1.94	1.48	5.02
1956					
Jan.-Mar.....	1.73	1.46	1.98	1.49	5.42
Apr.-June.....	1.71	1.45	2.08	1.53	5.67
July-Sept.....	1.74	1.53	2.17	1.55	5.87
Oct.-Dec.....	1.86	1.63	2.24	1.59	6.24
1957					
Jan.-Mar.....	1.92	1.64	2.31	1.65	6.03
Apr.-June.....	1.98	1.73	2.30	1.68	5.99
July-Sept.....	2.00	1.70	2.29	1.73	6.04

^{1/} Computed on the basis of total wages and salaries paid and total hours worked. Seasonally adjusted to eliminate variations due to Christmas bonuses, paid vacations and holidays, etc.

The changes in productivity and rates vary widely among the various categories of personnel. For fieldmen, the increase in wage rates of some 12 percent has been more than offset by an increase of over 20 percent in efficiency. Most of the 21 percent increase in plant labor wage rates has been absorbed by a 14 percent increase in efficiency. The overall increase in unit costs has resulted

from changes in delivery costs; these costs account for more than half of all personnel costs. During the 9 quarters' period delivery wage rates have increased over 18 percent, while labor efficiency has increased only 2 percent. The 15 percent increase in office personnel salary rates has resulted in a comparable net increase in unit costs since there has been no definite change in efficiency. Net unit cost for executives has also increased as a result of 19 percent rise in salary rates, but only an 11 percent increase in efficiency.

Table 3.--MINUTES OF PERSONNEL TIME: per hundred pounds of milk and cream processed, (adjusted for seasonal variations)

Period	Personnel categories					
	Field	Plant	Delivery	Office	Executives	Total
	Minutes	Minutes	Minutes	Minutes	Minutes	Minutes
<u>1955</u>						
July-Sept.....	1.7	22.9	34.3	6.2	1.9	67.1
Oct.-Dec.....	1.7	23.0	38.2	6.4	1.8	71.2
<u>1956</u>						
Jan.-Mar.....	1.8	22.4	37.1	6.6	1.7	69.7
Apr.-June.....	1.7	22.2	37.1	6.4	1.7	69.1
July-Sept.....	1.7	21.5	36.2	6.7	1.6	67.7
Oct.-Dec.....	1.6	20.6	32.8	6.4	1.6	63.0
<u>1957</u>						
Jan.-Mar.....	1.4	20.2	34.4	6.2	1.6	63.9
Apr.-June.....	1.4	19.7	34.9	6.5	1.6	64.0
July-Sept.....	1.3	19.7	36.0	6.2	1.7	64.9

1/ Because of rounding, does not always equal sum of components.

INDIVIDUAL DISTRIBUTORS' NET PROFIT, BEFORE INCOME TAXES, SHOWS WIDE VARIATIONS

While the average net profit, before income taxes, of a large group of firms shows substantial seasonal and trend variations, such averages reveal little of the operation of the individual firm. For the year 1957, average net return for all firms was \$0.37 per hundredweight of milk and cream purchased (table 1) but for individual firms net return varied from a profit of \$1.38 to a loss of \$0.77, a range of \$2.15 (table 4). Large size firms had the widest range (\$2.15) and medium size firms had the narrowest range (\$1.54).

For individual firms, whatever the level of net profit may be for a given quarter, it can be expected, on the average, either to increase or decrease \$0.39 in the next quarter. This was determined by a study of quarter-to-quarter

Table 4.—DISTRIBUTION OF NET PROFIT, before income taxes, per hundred pounds of milk and cream processed for 1957

Amount of net profit per hundred pounds	All firms	Large firms	Medium firms	Small firms
<u>Dollars</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>
1.20 and over.....	5	4	5	6
1.00 to 1.19.....	2	4	—	—
.80 to .99.....	7	5	5	12
.60 to .79.....	17	14	21	18
.40 to .59.....	22	23	32	13
.20 to .39.....	22	36	16	12
.00 to .19.....	12	4	16	17
-.01 to -.19.....	5	5	—	11
-.20 to -.39.....	4	—	5	6
-.40 and less.....	4	5	—	5

Range in net profits				
	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>
Largest.....	1.38	1.38	1.29	1.33
Smallest.....	- .77	- .77	- .25	- .44

variations in net profits for 24 quarters January-March 1952 through October-December 1957 (table 5). Changes in profits from quarter to quarter ranged, in the extreme cases, from an increase of \$2.35 to a decrease of \$2.30.

None of the firms was able to maintain net profits on an even basis. Profits for three firms have been charted (fig. 3). These firms are typical of their size groups for variation in profits but are not necessarily typical for level of profits.

Determination of the causes of variation in net profits will require considerably more study. Some will be additive, others will be offsetting. Without detailed analysis it may be assumed that among the causes may be the volume of milk processed, variation of the product line, the relatively fixed nature of most operating costs, and the fact that prices paid for raw milk and cream change more often than do prices received for products sold. For instance,

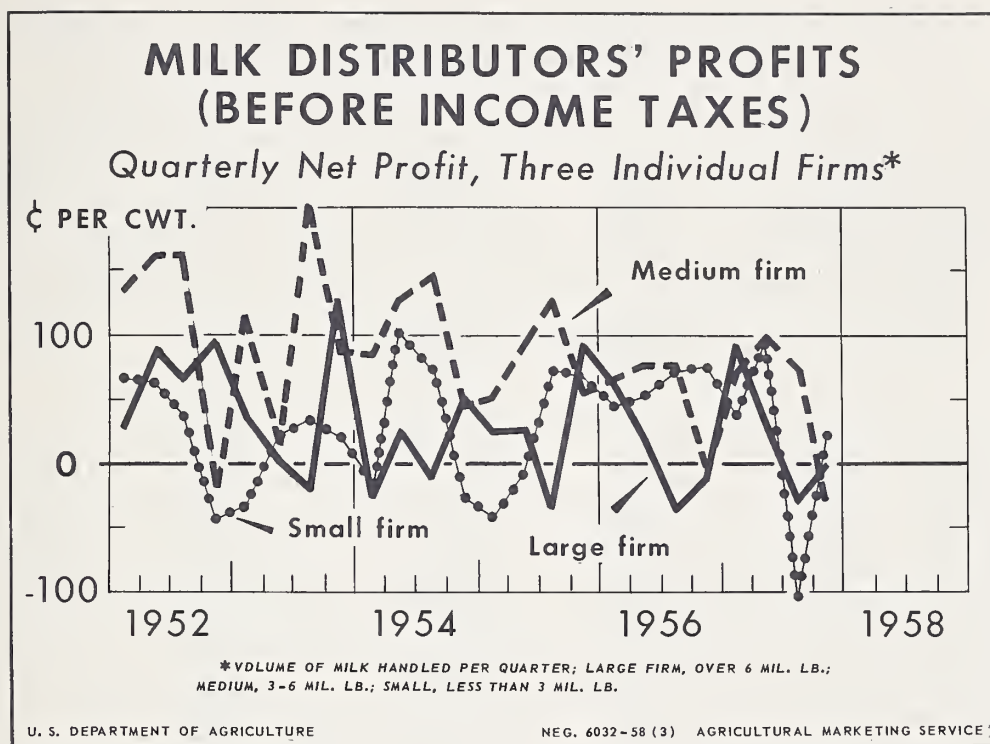


Figure 3

for the individual firms, prices paid may change four times a year, or, in some cases, every month. Sales experience may indicate that it is unwise to change prices for products more often than twice a year. In addition, for the individual firm, other causes of variation in net profits may include labor disputes, milk strikes, price wars, and adverse weather conditions.

There are no statistically significant differences in the net profit among the large, medium, and small firms. Analysis of variance among the size groups shows that the probabilities are more than 3 to 1 that the variations were due to chance alone. However, there are some indications that larger firms may be slightly more stable than smaller firms. The average change in net profits for large size firms was an increase or decrease of \$0.34, for medium size firms \$0.40, and for small size firms \$0.44. Medium size firms had a wider range in net profits than did either the large or small groups. Frequency of changes occurring within certain limits may also be some indication of relative stability: For all firms 61.5 percent of the changes fall within a range of a plus 39 to a minus 39. Comparable data by size categories are: Large--66.4 percent; medium--60.1 percent; small--56.4 percent.

There are statistically significant differences in the changes in net profit among the four quarters of the year. Analysis of variance among the quarters shows that the probabilities are about 200 to 1 that the variations were not due to chance alone (table 6). In the first quarter of the year 61.7 percent of all

Table 5.--CHANGES IN NET PROFITS OF DAIRY FIRMS: quarter to quarter changes, (before income taxes) for selected firms, 24 quarters, 1952-57

Amount of change in net margin per hundred pounds of milk and cream processed	All firms	Large firms 1/	Medium firms 1/	Small firms 1/
Dollars	Percent	Percent	Percent	Percent
1.00 and over.....	3.4	3.1	2.5	4.6
.80 to .99.....	2.1	1.3	1.8	3.1
.60 to .79.....	4.9	3.9	5.9	5.1
.40 to .59.....	8.9	8.1	9.0	9.6
.20 to .39.....	12.0	11.0	13.8	11.3
.00 to .19.....	19.5	23.7	19.2	15.2
-.01 to -.19.....	16.2	19.8	14.2	14.5
-.20 to -.39.....	13.3	11.9	12.9	15.4
-.40 to -.59.....	8.5	7.3	9.5	8.7
-.60 to -.79.....	4.9	5.5	4.3	5.1
-.80 to -.99.....	2.4	2.2	2.2	2.6
-1.00 and less.....	3.9	2.2	4.7	4.8

Percentage of quarters				
With increases.....	50.8	51.1	52.2	48.9
With decreases.....	49.2	48.9	47.8	51.1

Amount of change in net margin per hundredweight				
	Dollars	Dollars	Dollars	Dollars
Average change.....	0.39	0.34	0.40	0.44
Range in individual quarterly changes:				
Greatest increase..	2.35	1.87	2.35	1.66
Greatest decrease..	2.30	2.07	2.02	2.30

1/ Size of firms: In millions of pounds of milk handled per quarter. Large--6.0 and over; medium--3.0 to 6; small--less than 3.

Table 6.--CHANGES IN NET PROFIT OF DAIRY FIRMS: changes by quarters, (before income taxes) for selected firms, 24 quarters, 1952-57

Amount of change in net margin per hundred pounds of milk and cream processed	All quarters	First quarters	Second quarters	Third quarters	Fourth quarters
<u>Dollars</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>
1.00 and over.....	3.4	2.2	3.4	3.8	3.7
.80 to .99.....	2.1	4.5	1.1	1.7	1.4
.60 to .79.....	4.9	7.4	6.0	2.3	4.6
.40 to .59.....	8.9	10.8	7.4	7.2	10.6
.20 to .39.....	12.0	13.4	10.9	10.2	14.0
.00 to .19.....	19.5	23.4	17.7	18.6	19.1
-.01 to -.19.....	16.2	17.1	16.9	16.9	14.3
-.20 to -.39.....	13.3	10.8	14.0	15.4	12.6
-.40 to -.59.....	8.5	4.0	9.2	13.7	6.0
-.60 to -.79.....	4.9	2.6	6.0	6.1	4.6
-.80 to -.99.....	2.4	1.9	3.1	1.2	3.1
-1.00 and less.....	3.9	1.9	4.3	2.9	6.0

<u>Percentage of quarters:</u>					
With increases.....	50.8	61.7	46.5	43.8	53.4
With decreases.....	49.2	38.3	53.5	56.2	46.6

	<u>Average of differences from previous quarter</u>				
	<u>Cents</u>	<u>Cents</u>	<u>Cents</u>	<u>Cents</u>	<u>Cents</u>
Large.....	-0.5	+8.1	-8.6	-3.2	+3.3
Medium.....	-2.0	+11.5	-3.1	-9.0	-4.3
Small.....	-1.3	+11.3	-4.0	-4.8	-4.7
All firms.....	-1.3	+10.3	-5.3	-5.7	-1.8

changes from the previous quarter were increases. For the other quarters the increase were: Second quarter--46.5 percent, third quarter--46.5 percent; and fourth quarter--53.4 percent. These data are consistent with the weighted average net profits (table 1) which show that profits are higher in the first half of the year than in the last half.

Average differences from the previous quarter tend to indicate slightly more stability in large firms. Medium sized firms show the least stability (table 6). The average difference of a minus 1.3 cents for all firms for all quarters would be expected since average profits have been decreasing.

The data presented here apply only to variations in net profits on a quarter-to-quarter basis. They do not measure the amount of net profits and are not necessarily an indication of the rate of net profit of various sizes of firms.

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